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(54) Title: PLANTS MODIFIED WITH MINI-CHROMOSOMES

(57) Abstract: The invention is generally related to methods of generating plants transformed with novel autonomous mini-chromosomes. Mini-chromosomes with novel compositions and structures are used to transform plants cells which are in turn used to generate the plant. Methods for generating the plant include methods for delivering the mini-chromosome into plant cell to transform the cell, methods for selecting the transformed cell, and methods for isolating plants transformed with the mini-chromosome. Plants generated in the present invention contain novel genes introduced into their genome by integration into existing chromosomes.